WHAT IS CLAIMED IS:

1. A system for positioning a platen with respect to a coordinate system having an X axis, a Y axis, and a Z axis, said X, Y, and Z axes being orthogonal, the system comprising:

a fixed base rigidly coupled to an essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the X axis along the fixed base;

an XY stage slidably coupled to the XY intermediate plate, wherein the XY stage is slidable in the Y axis along the XY intermediate plate; and

a platen flexibly coupled to the XY stage, wherein the platen, with respect to the XY stage, is essentially constrained in the direction of the X and Y axes and moveable in the direction of the Z axis.

2. The system of claim 1 further comprising:

an X axis locking device for stabilizing the XY intermediate plate with respect to the fixed base by temporarily coupling the XY intermediate plate to the fixed base.

3. The system of claim 2 wherein the X axis locking device includes an actuator that contacts a portion of the fixed base.

4. The system of claim 1 further comprising:

a Y axis locking device for stabilizing the XY stage with respect to the XY intermediate plate by temporarily coupling the XY stage to the XY intermediate plate.

5. The system of claim 4 wherein the Y axis locking device includes an actuator that

contacts a portion of the XY stage.

6. The system of claim 1 further comprising one or more flexures for flexibly attaching the XY stage and the platen.

7. The system of claim 6 further comprising:

a preloading device positioned between the XY stage and the platen, wherein the preloading device stabilizes the platen, with respect to the XY stage, by reducing the risk of Y axis compressive buckling of the one or more flexures.

8. The system of claim 7 further comprising:

a micropositioning stand.

9. The system of claim 8 wherein the micropositioning stand is configured to accept a read-write head assembly.

10. The system of claim 9 wherein the micropositioning stand includes a piezoelectric crystal for micropositioning the read-write head assembly.

11. The system of claim 1 further comprising:

one or more bearing assemblies for slidably attaching the XY intermediate plate to the fixed base.

12. The system of claim 11 further comprising:

an X axis linear actuator for controlling the X axis movement of the XY intermediate plate with respect to the fixed base.

13. The system of claim 1 further comprising:

one or more bearing assemblies for slidably attaching the XY stage to the XY intermediate plate.

14. The system of claim 13 further comprising:

a Y axis linear actuator for controlling the Y axis movement of the XY stage with respect to the XY intermediate plate.

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15. A spinstand platform comprising:

a vacuum-preloaded air bearing platen for supporting a micropositioning stand, the platen constrained for three-dimensional motion above an essentially planar surface, the micropositioning stand adapted to support a read-write head assembly;

at least one actuator for moving the platen to a desired XY location above the essentially planar surface; and

an apparatus for removing air from the platen to move the platen along the Z axis and lock down the platen to the essentially planar surface at the desired location.

16. A spinstand platform comprising:

an air bearing platen for supporting a micropositioning stand, the platen constrained for three-dimensional motion above an essentially planar surface, the micropositioning stand adapted to support a read-write head assembly;

a slide brake assembly for moving the platen to a desired XY location above the essentially planar surface; and

an apparatus for removing air from the platen to move the platen along the Z axis and lock down the platen to the essentially planar surface at the desired location.

17. The platform of claim 16 wherein the slide brake assembly includes:

a fixed base rigidly coupled to the essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the X axis along the fixed base; and

an XY stage slidably coupled to the XY intermediate plate, wherein the XY stage is slidable in the Y axis along the XY intermediate plate and the platen is flexibly coupled to the XY stage.

18. The platform of claim 17 further comprising:

an X axis locking device for stabilizing the XY intermediate plate with respect to the fixed base by temporarily coupling the XY intermediate plate to the fixed base.

19. The platform of claim 18 wherein the X axis locking device includes an actuator that contacts a portion of the fixed base.

20. The platform of claim 17 further comprising:

a Y axis locking device for stabilizing the XY stage with respect to the XY intermediate plate by temporarily coupling the XY stage to the XY intermediate plate

21. The platform of claim 20 wherein the Y axis locking device includes an actuator that contacts a portion of the XY stage.

22. The platform of claim 17 further comprising one or more flexures for flexibly attaching the XY stage and the platen.

23. The platform of claim 22 further comprising:

a preloading device positioned between the XY stage and the platen, wherein the preloading device stabilizes the platen, with respect to the XY stage, by reducing the risk of Y axis compressive buckling of the one or more flexures.

24. The platform of claim 23 further comprising:

a micropositioning stand.

25. The platform of claim 24 wherein the micropositioning stand is configured to accept a read-write head assembly.

26. The platform of claim 25 wherein the micropositioning stand includes a piezoelectric crystal for micropositioning the read-write head assembly.

27. The platform of claim 17 further comprising:

one or more bearing assemblies for slidably attaching the XY intermediate plate to the fixed base.

28. The platform of claim 27 further comprising:

an X axis linear actuator for controlling the X axis movement of the XY intermediate plate with respect to the fixed base.

29. The platform of claim 17 further comprising:

one or more bearing assemblies for slidably attaching the XY stage to the XY intermediate plate.

30. The platform of claim 29 further comprising:

a Y axis linear actuator for controlling the Y axis movement of the XY stage with respect to the XY intermediate plate.

31. The platform of claim 16 wherein the slide brake assembly includes:

a fixed base rigidly coupled to the essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the Y axis along the fixed base; and

a platen slidably and flexibly coupled to the XY intermediate plate, wherein the platen is slidable in the X axis along the XY intermediate plate, and wherein the platen is moveable in the direction of the Z axis with respect to the XY intermediate plate.

32. The platform of claim 31 further comprising:

a Y axis locking device for stabilizing the XY intermediate plate with respect to the fixed base by temporarily coupling the XY intermediate plate to the fixed base.

33. The platform of claim 32 wherein the Y axis locking device includes an actuator that contacts a portion of the fixed base.

34. The platform of claim 31 further comprising:

an X axis locking device for stabilizing the platen with respect to the XY intermediate plate by temporarily coupling the platen to the XY intermediate plate.

35. The platform of claim 34 wherein the X axis locking device includes an actuator that contacts a portion of the XY intermediate plate.

36. The platform of claim 31 further comprising one or more flexures for flexibly attaching the XY intermediate plate and the platen.

37. The platform of claim 31 further comprising:

a micropositioning stand.

38. The platform of claim 37 wherein the micropositioning stand is configured to accept a read-write head assembly.

39. The platform of claim 38 wherein the micropositioning stand includes a piezoelectric crystal for micropositioning the read-write head assembly.

40. The platform of claim 31 further comprising:

one or more bearing assemblies for slidably attaching the XY intermediate plate to the fixed base.

41. The platform of claim 40 further comprising:

a Y axis linear actuator for controlling the Y axis movement of the XY intermediate plate with respect to the fixed base.

42. The platform of claim 31 further comprising:

one or more bearing assemblies for slidably attaching the platen to the XY intermediate plate.

43. The platform of claim 42 further comprising:

an X axis linear actuator for controlling the X axis movement of the platen with respect to the XY intermediate plate.

44. A spinstand platform comprising:

an air bearing platen for supporting a micropositioning stand, the platen constrained for three-dimensional motion above an essentially planar surface, the micropositioning stand adapted to support a read-write head assembly;

a slide brake assembly for moving the platen to a desired XY location above the essentially planar surface; and

an apparatus for removing air from a gap between the platen and the essentially planar surface to move the platen along the Z axis and lock down the platen to the essentially planar surface at the desired location.

45. A spinstand platform comprising:

an air bearing platen for supporting a micropositioning stand, the platen constrained for three-dimensional motion above an essentially planar surface, the micropositioning stand adapted to support a read-write head assembly;

at least one actuator for moving the platen to a desired XY location above the essentially planar surface; and

a vacuum preloading apparatus for removing air from the platen to stabilize the platen along the Z axis and maintain the platen a defined Z axis distance above the essentially planar surface.

46. A spinstand platform comprising:

an air bearing platen for supporting a micropositioning stand, the platen constrained for three-dimensional motion above an essentially planar surface, the micropositioning stand adapted to support a read-write head assembly;

a slide brake assembly for moving the platen to a desired XY location above the essentially planar surface; and

a vacuum preloading apparatus for removing air from the platen to stabilize the platen along the Z axis and maintain the platen a defined Z axis distance above the essentially planar surface.

47. The platform of claim 46 wherein the slide brake assembly includes:

a fixed base rigidly coupled to the essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the X axis along the fixed base; and

an XY stage slidably coupled to the XY intermediate plate, wherein the XY stage is slidable in the Y axis along the XY intermediate plate and the platen is flexibly coupled to the XY stage.

48. The platform of claim 47 further comprising one or more flexures for flexibly attaching the XY stage and the platen.

49. The platform of claim 48 further comprising:

a preloading device positioned between the XY stage and the platen, wherein the preloading device stabilizes the platen, with respect to the XY stage, by reducing the risk of Y axis compressive buckling of the one or more flexures.

50. The platform of claim 46 wherein the slide brake assembly includes:

a fixed base rigidly coupled to the essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the Y axis along the fixed base; and

a platen slidably and flexibly coupled to the XY intermediate plate, wherein the platen is slidable in the X axis along the XY intermediate plate, and wherein the platen is moveable in the direction of the Z axis with respect to the XY intermediate plate.

51. The platform of claim 50 further comprising:

one or more flexures for flexibly attaching the XY intermediate plate and the platen.

52. A system for positioning a platen with respect to a coordinate system having an X axis, a Y axis, and a Z axis, said X, Y, and Z axes being orthogonal, the system comprising:

a fixed base rigidly coupled to an essentially planar surface;

an XY intermediate plate slidably coupled to the fixed base, wherein the XY intermediate plate is slidable in the Y axis along the fixed base; and

a platen slidably and flexibly coupled to the XY intermediate plate, wherein the platen is slidable in the X axis along the XY intermediate plate, and wherein the platen is moveable in the direction of the Z axis with respect to the XY intermediate plate.

53. The system of claim 52 further comprising:

a Y axis locking device for stabilizing the XY intermediate plate with respect to the fixed base by temporarily coupling the XY intermediate plate to the fixed base.

54. The system of claim 53 wherein the Y axis locking device includes an actuator that contacts a portion of the fixed base.

55. The system of claim 52 further comprising:

an X axis locking device for stabilizing the platen with respect to the XY intermediate plate by temporarily coupling the platen to the XY intermediate plate.

56. The system of claim 55 wherein the X axis locking device includes an actuator that contacts a portion of the XY intermediate plate.

57. The system of claim 52 further comprising one or more flexures for flexibly attaching the XY intermediate plate and the platen.

58. The system of claim 52 further comprising:

a micropositioning stand.

59. The system of claim 58 wherein the micropositioning stand is configured to accept a read-write head assembly.

60. The system of claim 59 wherein the micropositioning stand includes a piezoelectric crystal for micropositioning the read-write head assembly.

61. The system of claim 52 further comprising:

one or more bearing assemblies for slidably attaching the XY intermediate plate to the fixed base.

62. The system of claim 61 further comprising:

a Y axis linear actuator for controlling the Y axis movement of the XY intermediate plate with respect to the fixed base.

63. The system of claim 52 further comprising:

one or more bearing assemblies for slidably attaching the platen to the XY intermediate plate.

64. The system of claim 63 further comprising:

an X axis linear actuator for controlling the X axis movement of the platen with respect to the XY intermediate plate.